

Appendix 1: Disease and Drug Procedure Classification

Outcome	ICD Code
Prenatal Mood and/anxiety disorder	A woman was considered to have prenatal mood and/or anxiety disorder (e.g. anxiety and/or depression) if in the 15 months prior to giving birth (or hospital discharge in case of a stillbirth) she had: one or more hospitalizations with a diagnosis for depressive disorder, affective psychoses, neurotic depression, or adjustment reaction (ICD-9-CM codes 296.2-296.8, 300.4, 309, 311; ICD-10-CA codes F31, F32, F33, F34.1, F38.0, F38.1, F41.2, F43.1, F43.2, F43.8, F53.0, F93.0) OR one or more physician visits with a diagnosis for depressive disorder, affective psychoses, or adjustment reaction (ICD-9-CM codes 296, 309 or 311) OR one or more hospitalizations with a diagnosis for anxiety disorders (ICD-9-CM code 300; ICD-10-CA codes F32.0, F34.1, F40, F41, F42, F44, F45.0, F451, F452, F48, F68.0, F99) OR one or more hospitalizations with a diagnosis for anxiety states, phobic disorders, or obsessive- compulsive disorders (ICD-9-CM codes 300.0, 300.2, 300.3; ICD-10-CA codes F40, F41.0, F41.1, F41.3, F41.8, F41.9, F42) OR two or more physician visits with a diagnosis for anxiety disorders (ICD-9-CM code 300).
Neonatal outcomes	
Neonatal Mortality	Death among infants within 0 to 27 days.
Infant Mortality	Death among infants within one year of birth.
Low birth weight	Birth weight less than 2,500 grams and taken from the hospital birth record
High Birth weight	Birth weight greater than 4,000 grams and taken from the hospital birth record
Small for gestational age	Infants that are at or below the 10 th percentile in birth weight, based on birth weight, gestational age and sex (all taken from the hospital birth record)
Large for gestational age	Infants that are at or above the 90 th percentile in birth weight, based on birth weight, gestational age and sex (all taken from the hospital birth record)
Preterm birth	A live birth where the gestational age is less than 37 weeks
Apgar score	Five minute Apgar score range from 0 to 10 and are available on the hospital record
Neonatal intensive care unit admissions	Infant who was admitted to the intensive care unit
Neonatal readmissions	Infants who have a hospital stay from 1 to 28 days after discharge alive from their birth hospitalization.
Breastfeeding initiation	Newborn feeding type recorded on the hospital discharge abstract as “breast”, “artificial” or “both breast and artificial”
Persistent Pulmonary hypertension of the newborn	ICD-10: P29.3 ICD-9: 747.83
Postnatal adaption syndrome	Including: Respiratory distress syndrome (RDS), Convulsions of newborn, Feeding difficulties, Jaundice, Hypoglycemia, Apgar scores – five minute Apgar score of 7 or less
Neonatal respiratory distress syndrome	ICD 10 – P22.6
Other respiratory morbidity	ICD 10: J93, P14.2, 22.1, 22.8-22.9, 24-26, 28.0-28.1, 28.5, 29.3; R57
Jaundice	ICD 10: P55, 57-59
Other Major Morbidity:	
Neurologic	ICD 10 G4; P20-21, 52, 90-91, R56
Infectious	ICD 10 A-, B-, P35-38, 39.3
Birth Injury	ICD 10 G54.0, J98.6, P10, 11.0-11.5, 12.0, 12.2, 13-14 (ot 14.2), 15.0-15.315.5-15.7

Cardiac	I42, 47-49, 51, 77, P29 (NOT P29.3), 83.2, Q21.1, 25.0, R00-01
Other	P50-51, 53, 56, 61.0-61.2
Gastrointestinal	P54.0-54.1, 75, 77, 76.0, 78.0-78.2, 96.1
Neonatal readmissions	ICD 10 codes for 'reason for admission' during neonatal readmissions at up to 28 days of age or post discharge
Respiratory	A 15-16, 31.0, 36-37, 42.0, 43.0, 48.2
Feeding difficulties	E 46, 86-87, K21, P74, 92, R11, 62.8, 63
Jaundice	R17, P55, 57-59
Infectious	G00-G08, G05.0, 60-60.1, 60.4, 75-7, 100-02, J10.8, 11.8, K12.2, 61, 65, L00-04, 05.0, 08, 30.3, M00-01, 72.6, 86, N10-12, 13.6, 15.1, 30, 34, 39.0, 43.1, 45, 48.1-48.2, P35-39, 81.9, R50 plus A or B but not in respiratory
Congenital Anomalies	All codes can be found in Brownell, et al 2010 Evaluation of the Healthy Baby Program Appendix Table 1
Significant congenital anomalies	ICD 10: E-7 59 (not E86-87, E84); Q0,2 (not 2.11, 2.50, 2.70), 30.0-31-37, 39, 50-51, Q52 (not 52.5), 56, 60-63, 71-75, 77-78, 79.0, 79.2-79.4, 79.8, 80-81, 82.0-82.4, 85-89,0
Down Syndrome	ICD9: 7580; ICD10 Q90.0-Q90.2, Q90.9
Neural Tube Defects: Anencephalus Craniorachischisis Iniencephaly Encephalocele Spina bifida with hydrocephalus Spina bifida without hydrocephalus	ICD9: 7400-7402, 7420, 7410, 7419 ICD 10: Q00.0-Q00.2, Q01.0-Q01.2, Q01.8, Q01.9, Q05.1-Q05.9, Q07.0
Spina Bifida	ICD9: 7410, 7419 ICD 10: Q05.1-Q05.9, Q07.0
Anencephaly and similar anomalies	ICD9: 7400-7402 ICD 10: Q00.0-Q00.2
Congenital Heart defects	ICD 9: 7450, 7451, 7456, 7452, 7554, 7460, 7461, 7462, 7463, 4767, 7471, 7472, 7470, 7473, 7474 ICD 10: Q20.0-Q20.32, Q20.38, Q20.4, Q20.50, Q20.58, Q20.6, Q21.2-Q21.4, Q21.8, Q22.0, Q22.2, Q22.4, Q22.5, Q22.8, Q23.4, Q25.1 – Q25.5, Q26.2, Q26.3
Hyoplastic left heart syndrome	7467, Q23.4
Cleft palate or cleft lip with or without cleft palate	ICD 9: 7490, 7491 ICD10: Q35.1, Q35.3, Q35.5, Q35.7, Q35.9, Q36, Q37
Oesophageal atresia/stenosis	ICD 9: 7503 ICD 10: Q03.0, Q03.1, Q03.8, Q03.9
Anorectal and large Intestinal Atresia/Stenosis	ICD 9: 7512 ICD 10: Q42.0-Q42.3, Q43.8-9
Hypospadias and Epispadia	ICD 9: 752.6 ICD 10: Q54.0-54.4, Q54.8-54.9, Q55.60, Q55.68, Q64.0
Gatroschisis	ICD 9: 7567 ICD 10: Q79.2-Q79.3, Q79.5
Renal Agneisis/Hypoplasia	ICD 9: 7530 ICD 10: Q60.0-Q60.6
Severe Neonatal Morbidity	<ul style="list-style-type: none"> • Neonatal sepsis: ICD–10–CA: P36, P39 • Respiratory distress syndrome: ICD–10–CA: P22

	<ul style="list-style-type: none"> • Hypoxic ischemic encephalopathy: ICD-10-CA: P91.6 • Convulsions of newborn: ICD-10-CA: P90 • Brachial plexus injury/palsy: ICD-10-CA: P14 • Persistent fetal circulation/Neonatal hypertension: ICD-10-CA: P29 • Grade III or IV Intraventricular hemorrhage (IVH)/ Periventricular Leukomalacia (PVL): ICD-10-CA P52.2, P91.2 • Intubation: 1GZ30CJ, 1GZ30JH, 1GZ31CAMP, 1GZ31CAND, 1GZ31CBND • Gastroschisis: Q79.3 • Omphalocele: Q79.2 • Diaphragmatic hernia: Q79.0+C88 • Congenital malformations of the circulatory system: Q20, Q21, Q22, Q23, Q24, Q25
Neurodevelopmental Disorders	
FASD	<ul style="list-style-type: none"> • Will link to FASD Database and see which children are diagnosed in this database. • Hospitalizations with a diagnosis of ICD 9 code 760.71, ICD 10 code of 86.0 or physician visit with any ICD 9 760 code
Autism	<ul style="list-style-type: none"> • One or more hospitalizations with any one of the recorded ICD-9-CM diagnostic codes as 299.0, 299.1, 299.8, or 299.9, or any one of the recorded ICD-10-CA diagnostic codes as F84.0-F84.5, F84.8, or F84.9 • One or more physician claims with the diagnosis code 299 • Identified as "ASD" within the variable <i>CATEORGYN</i> of the Manitoba Education Special Needs data file. (Children with ASD were previously identified by the code "AUT" in this variable within the education data.) • The Manitoba Education Special Needs data also contains a variable, <i>STATUSN</i>, that identifies whether the funding is approved, denied, non-supportable or terminated, and works in conjunction with <i>CATEGORYN</i>. Only those with an "approved status" are included in the selection process.
ADHD	<ul style="list-style-type: none"> • One or more hospitalizations with a diagnosis of hyperkinetic syndrome (ICD-9-CM code 314 or ICD-10-CA code F90) in one year; OR • One or more physician visits with a diagnosis of hyperkinetic syndrome (ICD-9-CM code 314) in one year; OR • Two or more prescriptions for ADHD drugs without a diagnosis of: <ul style="list-style-type: none"> ○ conduct disorder (ICD-9-CM code 312 or ICD-10-CA codes F63, F91, F92); OR ○ disturbance of emotions (ICD-9-CM code 313 or ICD-10-CA codes F93, F94); OR ○ cataplexy/narcolepsy (ICD-9-CM code 347 or ICD-10-CA code G47.4) in one year; OR • One prescription for ADHD drugs in one year AND a diagnosis of hyperkinetic syndrome in the previous three years.
Mental Disorders	
Mood and anxiety disorders	<ul style="list-style-type: none"> • One or more hospitalizations with a diagnosis for depressive disorder, affective psychoses, neurotic depression or adjustment reaction, ICD-9-CM codes 296.2-296.8, 300.4, 309, 311; ICD-10-CA codes F31, F32, F33, F34.1, F38.0, F38.1, F41.2, F43.1, F43.2, F43.8, F53.0, F93.0 • One or more physician visits with a diagnosis for depressive disorder, affective psychoses or adjustment reaction, ICD-9-CM codes 296, 309, 311 • One or more hospitalizations with a diagnosis for anxiety disorders, ICD-9-CM code 300; ICD-10-CA codes F32.0, F34.1, F40, F41, F42, F44, F45.0, F451, F452, F48, F68.0, F99, and one or more prescriptions for an antidepressant or mood stabilizer, ATC codes N03AB02, N03AB52,

	<p>N03AF01, N05AN01, N06A</p> <ul style="list-style-type: none"> One or more physician visits with a diagnosis for anxiety disorders, ICD-9-CM code 300, and one or more prescriptions for an antidepressant or mood stabilizer, ATC codes N03AB02, N03AB52, N03AF01, N05AN01, N06A
Substance Abuse	<ul style="list-style-type: none"> Alcoholic or drug psychoses, alcohol or drug dependence or nondependent abuse of drugs, ICD-9-CM codes 291, 292, 303, 304, 305; ICD-10-CA codes F10-F19, F55.
Schizophrenia	<ul style="list-style-type: none"> ICD-9-CM code 295; ICD-10-CA codes F20, F21, F23.2, F25) in hospital abstracts or physician visits
Personality Disorders	<ul style="list-style-type: none"> ICD-9-CM code 301; ICD-10-CA codes F34.0, F60, F61, F62, F68.1, F68.8, F69) in hospital abstracts or physician claims.
Suicide attempts	<p>A hospitalization with a diagnosis code for accidental poisoning: ICD-9-CM codes 965, 967, 969, 977.9, 986, E850-E854, E858, E862, E868; ICD-10-CA codes T39, T40, T42.3, T42.4, T42.7, T43, T50.9, T58, X40-X42, X44, X46, X47, Y10-Y12, Y16, Y17, only if there is a physician visit with a diagnosis code for accidental poisoning and a psychiatric tariff code either during the hospital stay or within 30 days post-discharge. Psychiatric tariff codes are as follows:</p> <ul style="list-style-type: none"> From the psychiatric schedule: <ul style="list-style-type: none"> 8444 Psychotherapy - group of two to four patients 8446 Psychotherapy - group of five or more patients 8472 Child and Youth Management Conference 8475 Psychiatry - Patient Care Family Conference 8476 Psychiatric Social Interview 8503 Complete history and psychiatric examination - adult 8504 Complete history and psychiatric examination - child 8553 Psychiatry Consultation - adult 8554 Psychiatry Consultation - child 8581 Psychotherapy - individual 8584 Psychiatric care - individual 8588 Electroshock therapy 8596 Consultation - Unassigned patient - child From the general schedule: <ul style="list-style-type: none"> 8580 Psychotherapy - individual 8587 Electroshock therapy 8589 Psychotherapy - group
Suicide completion (including accidental poisoning)	<ul style="list-style-type: none"> Accidental poisoning: ICD-9 codes E850-E854, E858, E862, E868; ICD-10 codes X40-X42, X46, X47 Poisoning with undetermined intent: ICD-10 codes Y10-Y12, Y16, Y17 Self-inflicted poisoning: ICD-9 codes E950-E952, ICD-10 codes X60-X69 Self-inflicted injury by hanging, strangulation and suffocation: ICD-9 code E953, ICD-10 code X70 Self-inflicted injury by drowning: ICD-9 code E954, ICD-10 code X71 Self-inflicted injury by firearms and explosives: ICD-9 code E955, ICD-10 codes X72-X75 Self-inflicted injury by smoke, fire, flames, steam, hot vapours and hot objects: ICD-9 codes E958.1, E958.2; ICD-10 codes X76, X77 Self-inflicted injury by cutting and piecing instruments: ICD-9 code E956; ICD-10 codes X78, X79 Self-inflicted injury by jumping from high places: ICD-9 code E957, ICD-10 code X80 Self-inflicted injury by jumping or lying before a moving object: ICD-9 code E958.0, ICD-10 code X81 Self-inflicted injury by crashing of motor vehicle: ICD-9 code E958.5, ICD-10-CA code X82

	<ul style="list-style-type: none"> • Self-inflicted injury by other and unspecified means: ICD-9 codes E958.3, E958.4, E958.6-E958.9; ICD-10 codes X83, X84 • Late effects of self-inflicted injury: ICD-9 code E959
Other Disabilities	
Asthma	<ul style="list-style-type: none"> ◦ One or more physician visits with a corresponding ICD-9-CM diagnosis code of 493; OR ◦ One or more hospitalization with a corresponding ICD-9-CM diagnosis code of 493 or ICD-10-CA diagnosis code of J45; OR ◦ One or more prescriptions for medication to treat asthma.
Diabetes	<ul style="list-style-type: none"> • One or more hospitalizations with a diagnosis of diabetes: ICD-9-CM code 250 or ICD-10-CA codes E10-E14; OR • Two or more physician visits with a diagnosis of diabetes: ICD-9-CM code 250, OR • One or more prescriptions for medications to treat diabetes
Epilepsy	<ul style="list-style-type: none"> • ICD-9-CM code 345; ICD-10-CA codes G40, G41